

Claims:

1. A method for suturing tissue in the proximity of an aperture in a tissue wall, comprising:

5 forming a port from the proximal side of the tissue wall;

passing at least a portion of a suture from the distal side of the tissue wall proximally through the port in the tissue wall in the proximity of the aperture; and

10 forming a loop with the remaining portion of the suture to secure the suture.

2. The method of Claim 1, wherein forming a port comprises:

15 advancing a needle from the proximal side to the distal side of the tissue wall to form the port; and

wherein passing at least a portion of a suture comprises:

engaging the suture with the needle; and

10 withdrawing the needle and suture through the port.

3. The method of Claim 1, further comprising:

15 introducing a fastener over the portions of the suture.

4. The method of Claim 1, further comprising:

passing the remaining portion of the suture through the wall of a graft.

5. The method in Claim 1, wherein passing at least a portion of a suture comprises advancing a shaft through the aperture so that a pair of needles having a length of suture therebetween engage suture ports on opposite sides of the aperture, drawing the suture outwardly to guide the needles through the suture port into the tissue tract, and removing the ends of the suture from the needles.

6. The method in Claim 1, wherein passing at least a portion of a suture comprises advancing a shaft through the aperture so that at least one needle having a portion of suture engages the port, engaging the suture portion with the needle, drawing the suture portion through the tissue and retracting the needle from the port.

5 7. The method in Claim 1, further comprising:
passing the remaining portion of the suture through the aperture before the step of
passing the suture portion through the tissue wall.

8. A method for suturing an aperture in a vessel wall, comprising:
reversibly advancing a plurality of needles through the vessel wall to form ports in
10 the proximity of the aperture;
passing at least a portion of a suture proximally through the ports in the vessel wall
disposed on opposite sides of the aperture from the interior of the vessel with the remaining
portion of the suture passing out of the vessel; and
securing the ends of the suture to close the aperture.

15 9. The method as in Claim 8, further comprising:
passing the suture portion through the ports as a continuous loop with two ends.

10. The method as in Claim 8, further comprising:
passing the suture portion through the ports by passing at least a portion of a pair of
needles therethrough while carrying the suture portion therebetween.

20 11. The method as in Claim 10, further comprising:
carrying the suture portion between the pair of needles as a continuous length.

12. The method as in Claim 8, further comprising:
passing the needles from the exterior of the vessel, through the ports in the vascular
tissue, and external of the vessel so that at least a portion of the suture is external to the
25 vessel.

13. The method as in Claim 8, further comprising:
removing the suture portion from the needles after removing the needles from the vessel.

14. The method as in Claim 8, wherein the portions of the suture are secured
5 over the wall of the vessel to close an aperture.

15. The method as in Claim 8, wherein the portions of the suture are secured to
contact the vessel wall with a graft in an anastomosis procedure.

16. A method of suturing an opening in a vessel wall, comprising:
positioning opposite ends of a length of suture within the vessel;
puncturing holes through the vessel wall with a pair of needles; and
10 pulling the opposite ends of the length of suture through the vessel wall, wherein
each needle pulls an end of the length of suture in a proximal direction through the holes in
the vessel wall.

17. The method of Claim 16, further comprising:
15 tying the opposite ends of the length of suture to close an opening in the vessel wall.

18. The method of Claim 16, wherein the opposite ends of the suture loop are
positioned within the vessel by:
supporting the opposite ends of the length of suture on a distal end of an elongated
member; and
20 advancing the elongated member through the opening in the vessel wall such that the
distal end of the elongated member is positioned within the vessel.

19. The method of Claim 18, wherein each of the pair of needles moves in a
path which is radially angled to the elongated member as the needles pass through the
vessel wall.

20. The method of Claim 18, wherein the ends of the needles move radially outwardly from the elongated member prior to passing through the vessel wall.

21. The method of Claim 16, wherein each needle has a barbed tip.

22. The method of Claim 16, wherein the holes are disposed longitudinally along
5 the length of the vessel wall.

23. The method of Claim 16, wherein the holes are disposed transversely across
the width of the vessel wall.